CONSUMERS' Guide

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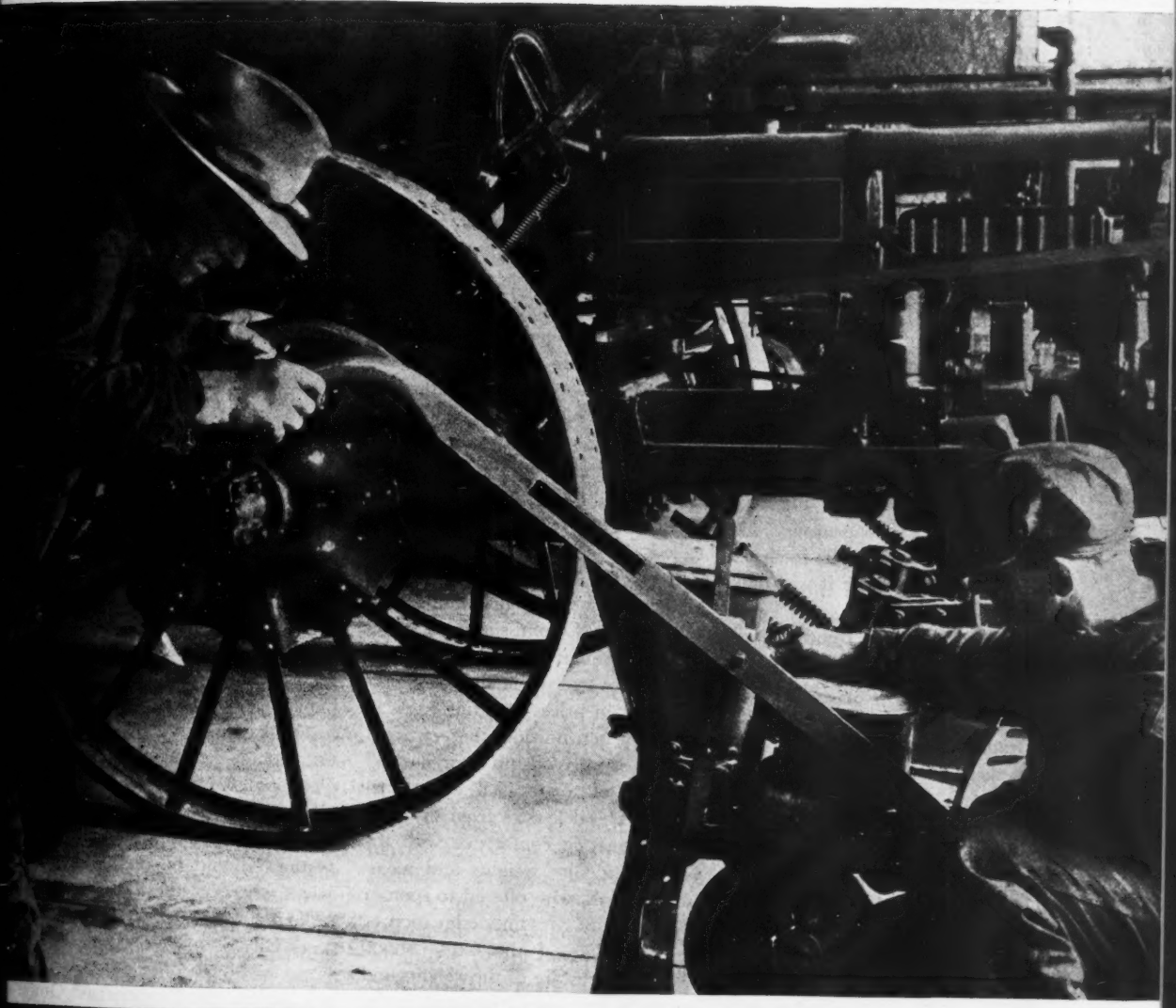


TECHNOLOGY ON THE FARM

CONSUMERS' Guide

Issued every two weeks by the Consumers' Counsel, Agricultural Adjustment Administration, Department of Agriculture, Washington, D. C.

VOL. IV, NO. 14 OCTOBER 4, 1937

RETURNS still come in from readers who want to register their votes in our poll on informative labeling. In our April 19 issue, we asked our readers: Would you like to be able to buy goods that are labeled and advertised so as to give you technical facts about their construction, their durability, their contents? Later issues (May 17, July 12) reported reader reaction to this question. Then and now the preponderance of votes is in favor of more informative labeling; not too technical, but facts that make it possible for consumers to know better the quality of the thing they are buying and to compare its quality more accurately with alternative articles. . . . Now comes a consumer in Connecticut to try to confound us. We enjoyed his tongue-in-cheek letter and want to share it with our readers:

"I do *not* favor the trend toward grade labeling and consumer standards in the things I buy", he writes. "It is much more fun to be fooled.

"Grade labeling would take away the element of surprise each time I opened a tin of canned food. It is these little surprises that add zest to life. If I knew what was in the soap and shaving cream that I buy I would be deprived of all the glamour that is usually associated with these products. Glamour offers an escape from a humdrum life.

"Think of the millions of people who would have to forego their reading matter in the newspapers and magazines if glowing advertisements used simple terms in describing their products. No, sir! It would take all the sport and adventure out of buying. . . .

"It is thrilling to buy by guesswork. . . . Grade labeling is of use only to those who are finicky and want to know just what they are spending their money for. They have no sporting blood. Fortunately they are few. As for me—fool me every time. It's wonderful."

MORE NEWS comes our way having to do with weights and measures—this time from the Consumers' National Federation. The Federation, always alive to matters of consumer concern, sent its representatives to the Thirty-first Annual Convention of the New York State Association of Sealers of Weights and Measures, held in New York City during 2 days in July. There officials from various cities gathered 300 strong to discuss the problems of maintaining fair weights and measures practices. In this case, the consumer didn't have to step up to safeguard his own interests; those interests were ably championed by the Government sealers, as these weights and measures men are generally called.

Need for teamwork proved the keynote of the convention. New York City's Commissioner of Markets put it squarely up to the Nation's housewives to "aid in the campaign to maintain prices at a fair level by carefully scrutinizing the size and weight of all foodstuffs purchased."

Result of this appeal was immediate. The delegates from the Federation met in conference with the New York City weights and measures officials, who offered to sponsor a program of consumer education.

To readers of the CONSUMERS' GUIDE, well aware of the weights and measures problems (discussed in the November 6, 1936, and April 19, 1937, issues), we pass on some suggestions made at the convention:

First, see whether or not there is a Government official—State, county, or city—whose duty it is to test the weights and measures used in your grocery or dry-goods store. Then write or call on this person offering him your cooperation. Find out how often he gets around to test each scale and measure, and what sort of seal he puts on one to show that it is accurate. Then keep an eye open for the seal whenever you shop.

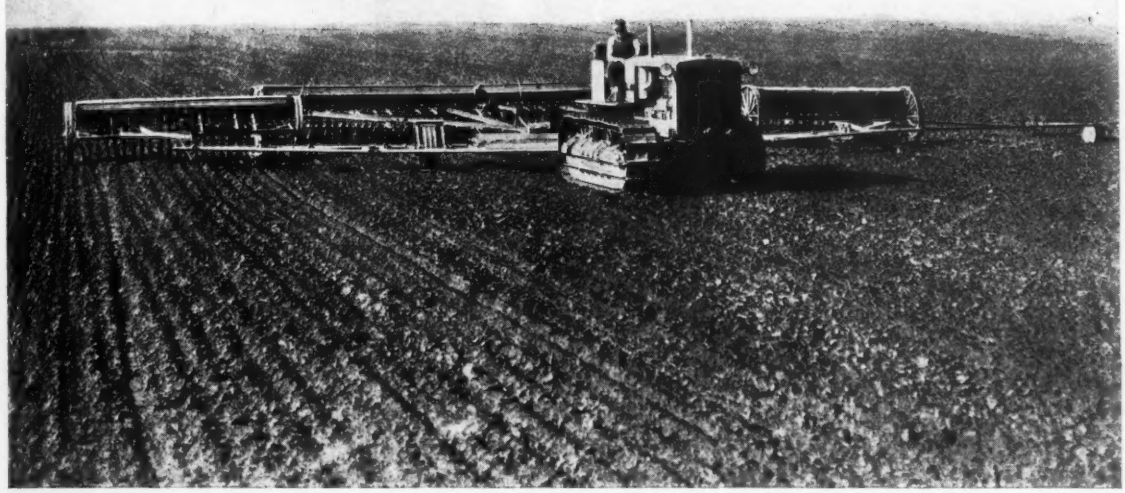
Important reminder is to watch the indicator on the scale to make sure that your grocer isn't short-weighing you even though his scales are correct. Consumers might ask their sealer to arrange a practical demonstration with a tested scale. For this the convention gave first-rate hints: "Weigh that 5-pound bag of loose sugar that was put up overnight. Weigh the package of bacon—last year 100 retailers in New York City pleaded guilty to selling 6-ounce packages of bacon for half-pounds. Can you tell how much air is whipped into your ice cream when it is sold by bulk instead of weight? This is one of the new ways of wrapping up air and selling it."

Consumers would do well to remember that every weights and measures inspection service must have sufficient funds, well-trained personnel, and full equipment if it is to prove a good watchman of public interests. In New York City, it is reported, the weights and measures department still has no fuel-oil gage to check the meters of fuel-oil dealers, though they have equipment for weighing coal trucks and testing gasoline meters.

General in application, these suggestions should be useful to housewives wherever they are—in Peoria or San Francisco as well as in New York City.

WATCH the CONSUMERS' GUIDE for announcement of a national consumer campaign for honest weights and measures. Your Consumers' Counsel Division is drawing up plans now.

TECHNOLOGY ON THE FARM



Consumers have common interest with the farmer in the turn that technological developments may give to rural life. Here we have some observations that Government experts, turned prophets, make about technology and the future of agriculture

THERE is fascination in forecasts whether made by a gypsy fortune-teller whose palm has been crossed with silver or by a Jules Verne writing of things yet to come. Prophesy can amount to more than a pastime in certain circumstances. If based squarely on knowledge of past trends, it can serve as a key to successful planning. To bring the matter to our own home grounds, a review of past events followed by a long look ahead into the future might help America put her natural resources to best use. Not that anticipation would provide a beacon by which business, agriculture, and labor could chart an undeviating course. That would be too much to expect. But at least it would suggest a general direction in which to steer.

With this belief, members of the National Resources Committee agreed, and on the strength of it, set themselves the task of making predictions in the field of technology. Reason for their choice of subject: Invention is the greatest general cause of change in the modern world. For instance, the automobile, a curiosity in 1900, has within 30 years transformed cities, created a whole new unit of population—the metropolitan area. It affected countless lives by drawing thousands of persons from remote districts into the trade belt widening around cities and by hurling city populations into suburbs. The inventor of the auto has been said to have wielded more power than Caesar, Napoleon, and Genghis Khan rolled into one.

Now the result of the Committee's study of technology, past, present, and future, appears in a volume, "Technological Trends and National Policy",* "the first major attempt to show the kinds of new inventions which may affect living and working conditions in America in the next 10 to 25 years. . . . It emphasizes the importance of national efforts to bring about prompt adjustment to these changing situations with the

**On sale by the Superintendent of Documents, Government Printing Office, Washington, D. C. Price, $1.*

Breeding experiments have meant livestock better suited to man's use. These lambs bear witness to the success attained in raising lambs primarily for heavy wool yield.

least possible social suffering and loss and sketches some of the lines of national policy directed to this end."

Though the Committee deals with many fields touched by technology, its findings in only one field—that of agriculture—concern us in this article. Anyone hoping that the Committee charted a map showing just the road that agriculture, mounted on its sturdy steed technology, will take is bound to be disappointed. Predicting is a tricky business beset by pitfalls. Government forecasters prefer to leave extravagant phrases to the crystal gazers and stick closely to caution.

Consequently they have surveyed the past, pointed out general trends that will probably continue, and posed the problems faced by technology and agriculture rather than offered solutions to those problems. Following their lead, we will treat of generalities. We will discuss the advance of technology in the field of agriculture and its implications. More particularly we will try to shed some light on the questions that America must face if she is to plan intelligently for the future of agriculture.

Technology as a tool of industry is a familiar story. Less familiar is the drama played with technology and agriculture as protagonists, stirring as it is. Technology has brought new machinery to the farm. It has brought power and light. It has contributed better plants and livestock. It has increased knowledge of soils. It has provided ways of coping with plant pests and disease. With surprising versatility it has handled the perfecting of marketing and managerial techniques. Nor has the bottom of technology's bag of gifts been reached. This it is safe to say: Technology, for all its accomplishments, is just getting off to a good start. Maximum efficiency, as a result of technological development, is still a lodestar on the distant horizon.

Let us take a closer look at the contributions technology has made to agriculture in the past. At the birth of our Nation, American farmers tilled their soil as their ancestors had done thousands of years before. Plows were crude wooden affairs. Sowing, cultivation, and harvest were matters for hand methods. Then, soon after the Revolution, commenced the long parade of inventions that carried farm productivity to new highs.

This series led off with the cotton gin. The grain cradle and iron plow came close upon its heels. By 1840 the threshing machine appeared opportunely since plenty of land was now available for growing the grain that was in demand in foreign markets. Invention flowed along steadily until the Civil War, when drain on the country's manpower spurred invention to new speed that resulted in the mowing machine, the steam tractor, the reaper. Climax of the development of farm machinery came later with the advent of the internal-combustion tractor, at last making possible conquest of the huge areas that had thus far resisted man's encroachments.

Meanwhile technology broadened its range of helpfulness. Breeding experiments resulted in better livestock, and in plants that could resist disease, yield larger harvests and hardier fruits. These new and improved strains of plants conspired with the tractor to help man to dominate the plains. New corn types pushed the Corn Belt westward, and importations of Russian wheat sent wheat-growing in the same direction. At the same time a war on plant disease brought victories all along the farm sector. Hoof-and-mouth disease was wiped out and rust-resistant wheat was developed. This story does not begin to cover the contributions to agriculture made by technology—the advances in transportation by motor truck, improvements in refrigeration that opened the way to improved quality in farm products and to re-

ducing waste, the market news service that by radio reports keeps the farmer abreast of price changes so that he can take advantage of favorable conditions.

Figures show the way that contributions of technology stepped up productivity of the agricultural worker. Since the year the Constitution was framed, the farmer's ability to feed city people, as well as himself, has increased many times. In 1840 agricultural workers comprised 77.5 percent of all persons gainfully employed in the United States; since then, the proportion has dropped steadily until in 1930 it was only 21.5 percent. Rate of increase in productivity, it seems, is a rising tide with no sign of abatement. Just as this trend in the past has spelled social change, so we must expect social cost as corollary to technological changes in the future.

We have mentioned contributions of technology that aimed directly at the goal of high farm efficiency. Results may be called the primary influences of the new technology. In another way it has increased farm efficiency by making available cheap materials and tools which the farmer can buy with farm products rather than produce himself.

Technology has affected rural lives in an indirect way. Inventors of the automobile, radio, telephone probably never gave the farmer and his problems a thought, yet their inventions left their mark on rural lives. Automobiles, the telephone, newspapers, the radio broke down provincial barriers, affecting rural fashions, manners, and morals. Invention brought the world to the farmer's door.

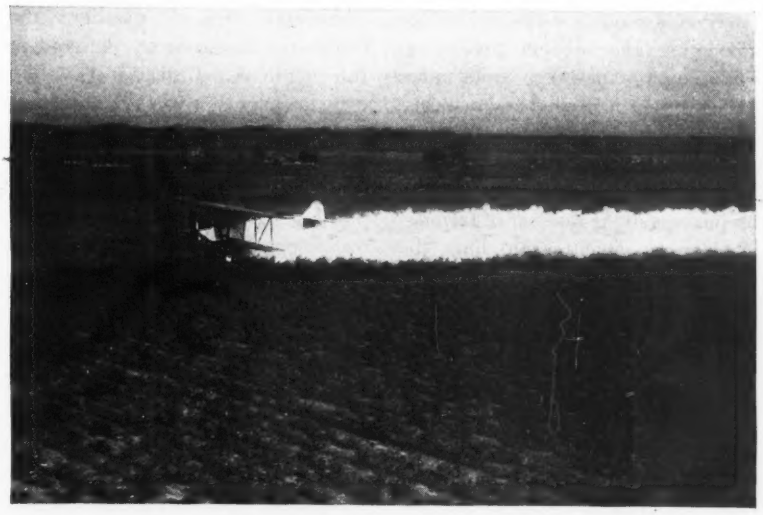
At least it brought the world to certain farmers' doors, for both these streams of influence—primary and secondary—spread unevenly over the countryside. This fact bears repetition. As the report says, "Farmers do not and cannot apply at equal rates the products of science and invention. Out of this fact arises one of the most significant impacts of technological change in agriculture." Technology is often hissed as the villain responsible for the fact that one farmer has his autos and electric refrigerators, while a second goes without. But guilt should rest not on invention, but on society, for the difficulty is with the "failure of the economic and social system to make needed readjustments."

Low incomes seem to be the main reason for certain farms lacking the modern conveniences—the electric power, refrigerators, etc.—that ease the rigors of farm life. Other farmers may be without such equipment yet have the finest tractors and machinery the market offers. These are the men who have emphasized production efficiency to such a point that they have overcapitalized their land and so lost their chance to have the household comforts enjoyed by some of their less prosperous brothers. In some types of agriculture per-capita production has increased much more slowly than in others. Mechanization hasn't helped the cotton, fruit, and tobacco grower as much as it has aided in the production of grain and hay crops.

Many times forces beyond the control of individual farmers militate for or against the use of discoveries. The relatively great distances between farms in the United States has handicapped electrification. In the case of tractors, topography has tabooed them in certain districts where land is too hilly or poorly drained. Dollars and cents raise a more general barrier to use of tractors, for tractors are expensive. Even though tractors may result in lower production costs and higher net incomes, their initial expense isn't justified if equipment is idle beyond certain time limits. A four-row corn planter, as the report says, is not economically justified on a farm that has only 10 to 20 acres of corn. Thus there has been added to the terms "man-sized farm" and "family-sized farm", the expression "tractor-sized farm."

Between these classes, "man-size", "family-size", "tractor-size", competitive tensions have grown up as technology advanced. "The man with the hoe and the man with a tractor" are not competitive equals where they are engaged in the same type of farming. There is bound to be resentment on the part of the small

Another product of inventive genius is the airplane duster to control insect pests. One plane can cover several cotton plantations in a day.



farmer toward his economic superior. Competitive tensions are bound to grow if agriculture continues in the way it has been going—toward greater concentration of land ownership with fewer farmers on fewer farms. Already legislators have grown alarmed at the turn agriculture has taken, have advanced legislative proposals to check both concentration of land ownership and tenancy in commercial farm production. Proposals to curb "corporation farming" have been made in several States. Programs to assist tenants and sharecroppers to buy land have been offered.

Some people might claim that technology in its advance has gathered such steam-roller force that it will inevitably sweep agriculture along toward greater concentration of land ownership no matter what opposition might be raised by man. The Committee on Natural Resources feels that this much is true—the force of technology cannot be stopped. But it feels that such force could be directed into socially desirable channels. If such guidance is attempted—and it is the hope of the Committee that it will be—a matter of prime importance is to agree upon a goal for agriculture. The alternatives, as the Committee sees it, are these:

"Should agriculture strive for maximum efficiency in production with larger and larger units, more concentrated ownership and management, and fewer and fewer farmers?

"Should it seek to support a large population with small incomes with an increase in the number of farms—an increase which would limit the application of technology?

"Should it seek some middle ground in which the ideal of 'family farms' is uppermost, that would limit without eliminating, further technological advance?

"Is there more justification for imposing a bar to technological advance in agriculture than in the case of numerous industries that have moved out of homes and small workshops into large factories?

"Instead of seeking to restrain technological advance would social ends be better served by concentrating on efforts to increase industrial production and employment in the expectation that jobs would ultimately be available to many excess agricultural workers?"

Inventions galore have made weather forecasting a more accurate science and agriculture a more efficient business. Here a forecaster of the Weather Bureau in Washington, D. C., examines a newly prepared map from which next day's forecasts will be made.

Answers to such questions the Committee does not try its hand at tracking down. Instead it shows the consequences that would result from certain courses of action and points out obstacles in the way of reaching other objectives. In other words, it puts up signposts along the various technological roads that agriculture can follow, but doesn't dictate a choice.

To return for a moment to the present trend in agriculture. As we have said, technological trends in agriculture have generally been toward bigness, toward extensive cultivation of large areas. There are important exceptions. Recently a curbing influence has been met in the development of small machinery units. In certain regions where there is intensive land use, farms have become smaller. But in general large-scale operation is growing. It brings certain advantages that cannot be denied. Larger units tend to reduce production costs and increase net income. They make possible a greater division of labor with more specialization; they justify larger investments in machinery; they make possible purchases of supplies in large quantities and reduce overhead much as large factories are better able than smaller competitors to cut costs.

So far the promises held out by the trend toward bigness look alluring. But if we start dreaming of achieving maximum efficiency quickly by sailing with this tide we run into trouble. The readjustment in terms of reorganization into larger units would be impossible in a short time. Capital has scanned the farming picture closely and seen risks it would be loath to assume. It

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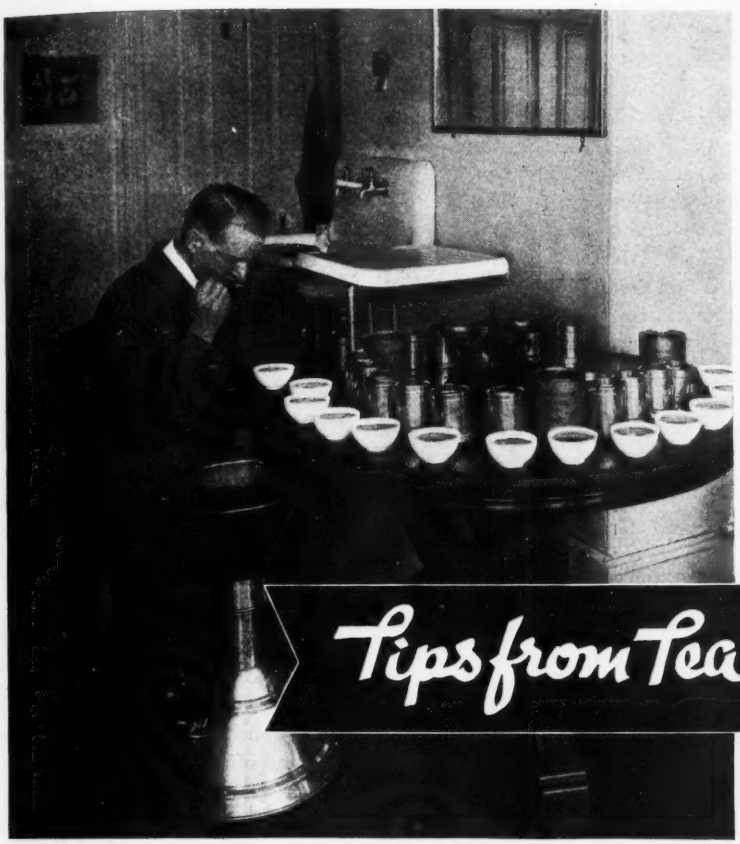

Tea tasters taste tea all day long without drinking a drop. To take more than a sip of one tea would impair their sense of taste for the next sample.

Tips from Tea Tasters

Tea makes its bid for favor by its flavor, not its food value. Knowing how to buy and how to prepare are prerequisites, connoisseurs warn, to getting full flavor value

PROFESSIONAL tea tasters have little fear that technological improvements or scientific progress in the tea industry will ease them out of their jobs. As long as people like a good cup of tea, folk with a keen sense of smell and taste will find their services needed in the tea business. A tea taster can appraise many teas in a few minutes, while the chemical analysis of a single tea is a long and expensive process.

Actual composition of each cup of tea varies with the tea and the method by which it is made. Tannin (which gives tea its briskness and pungency), caffeine (which provides the stimulant), and the essential oil of tea are its chief constituents making for flavor. However, tea leaves are composed of many other substances, too — proteins, carbohydrates, mineral and gummy matters. These components which may add or detract from the flavor of tea are present in such infinitesimal amounts that they are difficult to determine by laboratory method. As the popularity of tea is based primarily on the flavor and aroma of the liquor, to the tea producer it's the taste of his tea that counts.

Tea producers employ tea tasters to blend their teas and to test the quality of their brands. The United States Government also maintains tea examiners in five big ports—New York, Boston, Seattle, San Francisco, and Honolulu. Their job is to see that all teas, from the cheapest to the most costly, are sound, pure, and clean, and do not drop below a minimum standard of quality. Tea tasters' palates are tuned to the standards set for tea by a board of seven tea experts which is appointed each year by the Secretary of Agriculture. Only tea which meets these standards and the regulations of the Federal Tea Act, which is enforced by the Food and Drug Administration, is allowed to be sold in this country for food. Tea officials examined over 91½ million pounds of tea in the fiscal year ending June 30, 1937. This was almost 7,400,000 pounds more than was imported the previous year. Of these millions of pounds examined, less than 1 percent was rejected because it did not measure up to the standards of the Federal Tea Act. Reason for this

small percentage of rejections is that importers acquaint themselves with the U. S. standards and see that their tea conforms with them before they ship their products to this country.

Hundreds of different varieties and blends of tea are classified under three general headings: Green or unfermented, oolong or semi-fermented, black or fully fermented tea. The classification depends on the method of manufacturing the green leaves of some variety of the plant *Thea sinensis* (L.) into the product known as tea.

Green, black, or oolong tea can all be made from the leaves of the same plant. However, certain countries and specific districts in certain countries specialize in making one kind of tea. For centuries both China, where the beverage probably originated, and Japan, which developed tea drinking into an aesthetic cult, have manufactured green and black tea. Today our green teas come mainly from these two countries, our oolong tea from China and Formosa, and our black tea mainly from India, Ceylon, and the Netherland Indies. Over 73 percent of the tea examined at United States ports last year was black.

Difference between black and green tea depends on whether the green leaf has been allowed to ferment or not. Though each country has its own special technique in manufacturing, there are four major steps involved in making black tea—withering, rolling, fermenting, and firing. Leaves are first dried until they have lost some of their water content, then they are rolled either by hand or machine until the leaf cells are broken down and the juices are exposed to the air. During the rolling process a chemical change begins to take place in the leaves. Oxidation of the tannin begins and the essential oil of the leaves which gives black tea its aroma is developed. In the fermentation process these two changes are further developed. The leaves are spread on trays or on a conveyor table and left in a moist atmosphere for a few hours. Tea is a bright red tannin color when it comes from the fermentation room, but it turns to the familiar black when fired. Object of firing is to check further fermentation. When tea is removed from the hot, dry atmosphere of the firing room it is ready to be graded and packed for shipping.

In making green tea the leaves are not allowed to wither but are steamed, rolled, and fired. The fermenting process, in which much of the tannin is oxidized, is entirely omitted. As it is the tannin which gives tea its pungency, green teas have a much sharper taste than black. Green varieties have very little aroma. Essential oil which gives tea its odor is developed in the chemical changes which take place during the fermentation process.

Oolong tea is sometimes described as a cross between the green and black, as it has the fine aroma of black tea and the "bite" of green tea. It is prepared in somewhat the same manner as black tea except that fermentation is stopped much sooner.

Jasmine or other "flower teas" are green, black, or oolong tea which has been scented with flowers. After the tea is fired it is spread on containers in alternating layers of flowers and tea, usually three parts by weight of flowers to 100 parts by weight of tea. Flowers and tea are then heated together and later, before packing, the flowers are either left in the tea or sifted out.

Names of tea are often marks of the variety or the country in which it is grown. Thus over 95 percent of the teas shipped to the United States last year were classified as Ceylon, India, Java, Japan, Sumatra, Formosa Oolong, Ping Suey Green, Congou, Japan Dust, Formosa Black, and Japan Black. To tea experts each of these names is associated with a definite flavor. Tea connoisseurs are often as particular about the tea garden from which their tea comes as a wine fancier is of the vineyard where the grapes for his sauterne were raised. Tea grown in the gardens of Darjeeling, for instance, is favored by some tea drinkers over teas grown in the lowlands of India. Some tea drinkers prefer the black teas of China to those of India, and vice versa. Climatic and soil conditions in the season during which the leaves are plucked all affect the quality of the tea.

The evergreen tea plant will grow in many different types of soils and climates, but it flourishes best in an acid soil and in a moist atmosphere. When the plant grows wild it develops into a sturdy bush from 30 to 60 feet high. However, tea planters keep their bushes pruned down to from 3 to 5 feet. A tea bush may live for 50 years, but its prime-of-life span is only about 10 years, during which time it may yield a quarter of a pound of leaf in one season. The season in which the leaf is plucked depends on the locality in which it is grown. In southern India, Ceylon, Java, and Sumatra—localities which are free from frosts and droughts—

Number of leaves plucked from each tea shoot varies in different countries. For Orange Pekoe, however, only the first and second leaves are used.

the plucking of tea leaves is an all-year-around occupation. In colder sections of Japan and China the plants do not put out new leaves during the winter.

Orange Pekoe tea means tea made largely from the first and second leaf of the tea shoot. It is a term to describe the leaf size and is not to be taken as a mark of quality or as the name of a certain kind of tea. Orange Pekoe tea made from the leaves of high-grown bushes, for instance, is likely to be superior in quality to that made from the leaves of low-grown bushes.

Tea experts judge the quality of tea by the appearance, twist, and smell of the dry leaf, by the color, brightness, and odor of the tea infusion, and by the color, thickness, strength, pungency, and flavor of the liquor. They have many terms to describe each aspect of the tea. Appearance of the leaf varies with the kind of tea and method of manufacturing, but in general for black tea the leaf should be small, hard, well-rolled, and uniform. To test the freshness of tea, tea experts take a small handful and crumple it. An old tea when pressed will break and show dust, while a new tea has a spring to it and will not crumble easily.

Color of the infused leaf is a clue to the expert in judging cup quality. In black tea a rich golden leaf means fine tea, while a dark leaf is an indication of low-grade tea. Color of infused leaf of either black or green tea should always be even. Infused leaves of high-grade green tea are greenish yellow or greenish golden. High point in judging quality is the flavor of the tea liquor. According to one tea expert, "the ideal tea is a brisk, full, rich, flavory tea; thick and sirupy in the cup; not dark but rich in color." In describing the liquor, tasters use the word "flavor" to denote a sweetish taste and honey-like smell; the word "brisk" to describe a live as opposed to a flat taste.

Tea carefully measured into a warm porcelain pot, water freshly brought to boil, milk if desired (preferably not cream or sugar)—these are the essential ingredients, tea-wise experts say, of the well-prepared cup of this popular beverage.

Some tea connoisseurs blend their own tea. Most consumers buy their tea in pound or half-pound packages already blended. One can invest as little as 40 cents or as much as $100 in a pound of tea. There are on the market blends to suit every palate and practically every purse. To find the tea that is just right, consumers should turn amateur tea tasters and track down the flavor they like best.

Type of water supply available guides fastidious tea drinkers in their choice of tea. Tea infuses more readily in soft water than in hard water. Small, thick, full tea is very satisfactory for soft water, while for a hard water a brisk, full, flavory tea is a good choice. Though tea should

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A FORMULA FOR FARMERS AND CONSUMERS

BY HENRY A. WALLACE

Secretary of Agriculture

An Address Delivered in Allentown, Pennsylvania

IN THIS audience I understand there are both farmers and city consumers of farm products. It is a good occasion, therefore, to talk about the community of interest between the farmer and the consumer, between farmers and laboring men, and between farmers and businessmen. In these days when discord seems to be in the air over the entire world, many and loud are the voices striving to drive wedges between the farmers and these other groups. Eastern Pennsylvania, where there has long been a thrifty and stable farm population as well as great industrial activity, is an excellent place to discuss the community of interest between the farmer and the consumer.

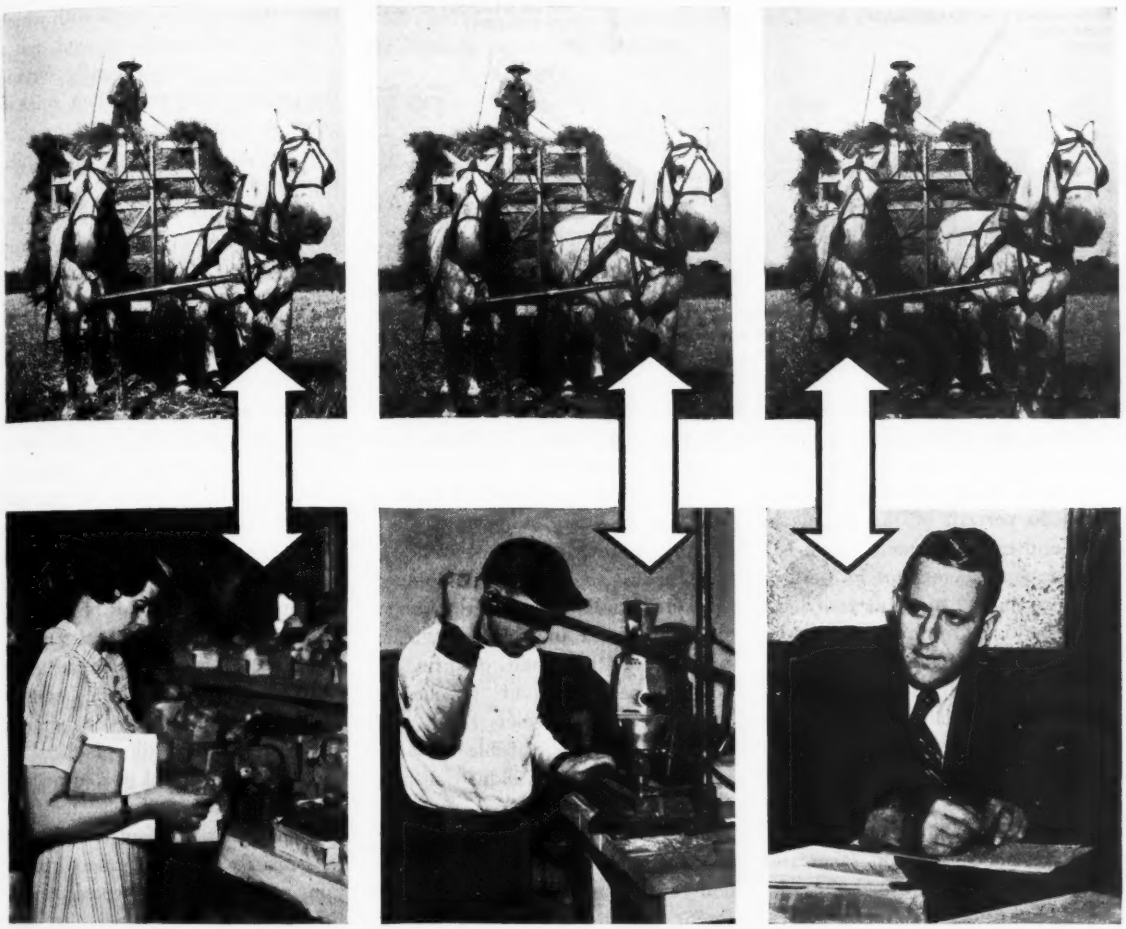
It is easy for people who live in the cities to forget the extent to which their income goes up and down with the income of agriculture. In like manner, it is easy for farmers to forget that their prosperity goes up and down with the pay rolls of labor. For the country as a whole, factory payrolls dropped about 6½ billion dollars between 1929 and 1932. Farm cash income also dropped over 6 billion. Between 1932 and 1937 farm cash income has risen nearly 5 billion dollars and factory payrolls have also risen about 5 billion. This interdependence exists in your State. I find that Pennsylvania experienced a 60-per cent decline in factory payrolls between 1929 and 1932, and that farm income declined 46 percent. Since 1932 factory payrolls in Pennsylvania have more than doubled and farm income has also nearly doubled. Pennsylvania farm income for the year 1937 will be about 90 percent of 1929 and her factory payrolls will be about 95 percent of 1929.

The relationship between farm income and labor payrolls emphasizes the ultimate community of interest between farmers and laboring men in a manner which outweighs 100 times over the irritations which farmers occasionally feel with respect to certain types of strikes and which consumers feel with respect to prices of certain food products. Many people like to play up the irritations between the farmer and the consumer, but it is my belief that if farmers and city people are to build the prosperity to which they are entitled here in the United States, they must more and more emphasize their common interest and pay less attention to the irritations.

It is to the interest of the consumer as well as of the farmer that a fair share of the national income should go to agriculture. In the year 1937, I believe that farmers, comprising 25 percent of the population, should be getting around 13 percent of the national income. Actually in 1937, they will probably receive less than 11 percent of the national income. While farmers in 1937 will receive more than twice as much cash income as in 1932, they will nevertheless be short of their fair share in the national income by about a billion dollars.

I am not one of those who believe that the farmers should have the same income in dollars as the nonfarm population. A dollar goes farther on the farm and apparently there are several million people who feel that they would be just as happy with 5 dollars on the farm as with 10 dollars in town.

As a matter of fact, during the 50 years previous to the World War, farmers ordinarily received about 50 percent as much per capita as the gainfully occupied in the nonfarm population. In 1929 they received only about 44 percent as much and in 1932 they received only about 25 percent as much. Today, if we include Government payments, they are back where they were in 1929, but they are not back to the prewar situation. When farmers get 50 percent as much in the way of dollars as the nonfarm population the resulting situation tends to promote a better long-time balance between farm and country than when the proportion falls below 50 percent. If farmers go along indefinitely with 10 to 11 percent of the national income, as was the case in the decade of the twenties and is the case at the present time, the result eventually will be to send so many of the young people from the farm into town that our civilization will become overurbanized. Moreover the

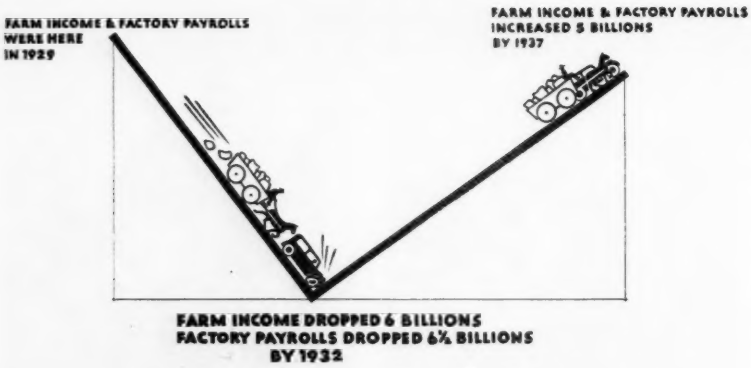


"It is a good occasion to talk about the community of interest between the farmer and the consumer, beween farmers and laboring men, and between farmers and businessmen"

farm people will not have enough income adequately to maintain the soil and the time will eventually come when our city people will have to pay much more for their food than they ought to or than they are paying at the present time.

On the other hand, if farmers, comprising only 25 percent of the population, should get 25 percent of the national income, the people in the towns and cities would have to pay perhaps from 5 to 10 billion dollars a year more to retailers for their food and clothing materials. This would cause genuine hardship among the poorer people in the cities, but the greatest confusion would be among the farmers themselves. If they could be assured of 2 dollars for wheat, a dollar and a half for corn, 30 cents a pound for cotton, and 15 cents a pound for hogs, they would plow every possible acre. With 2 years of ordinary weather, they would swamp the markets of the United States and the world in the same way they did in 1920 and 1921.

I wish to put into the hands of the town and city people of this audience figures which they can use vigorously to convert those who at the present time under a misconception are trying to stir up the consumers against the farmers. Because of the fact that food prices are now much higher than they were in 1932, many people wrongly assume that the consumers of the United States are paying a higher percentage of their income for food than ever before. As a matter of fact, the income of the town and city people during the past 5 years has risen faster than their retail food bill. The retail food bill has gone up about 3 billion dollars, but the in-


FARM INCOME & FACTORY PAYROLLS WERE HERE IN 1929
FARM INCOME & FACTORY PAYROLLS INCREASED 5 BILLIONS BY 1937
FARM INCOME DROPPED 6 BILLIONS
FACTORY PAYROLLS DROPPED 6¾ BILLIONS
BY 1932

come of the town and city people has gone up more than 15 billion dollars. In the year 1937, the cost of food at retail will represent only about 20 percent of the income of town and city consumers which is a smaller percentage than in 1929 or any year since. It is true that some farm products are unusually high in price as a result of the altogether extraordinary droughts of 1934 and 1936, but it is equally true that other farm products are unusually low in price as a result of the very favorable weather this year.

Those who do not see clearly the interdependence between farm and factory have often argued that the rise in food prices from the low levels of 1932 has hurt the consumer. They do not appreciate the fact that as farm and food prices are restored and as farm purchasing power is built up, there is an accompanying recovery in city jobs and weekly earnings which spells general recovery.

We have current records from a group of industries where over 17 million persons are now employed, compared with only 12.7 millions in 1932, and 18.6 in 1929. In 1932 the average wages of those employed in these industries was $1,070. This year there are not only nearly 5 million more employed in these industries, but the average earnings per person have gone up $207. The higher earnings have made possible the payment of about $85 more for the annual food bill, leaving about $122 available for other items in the worker's budget. While average earnings available for nonfood items are this year about 3 percent less than in 1929, living costs other than food are around 15 percent less. This gives the average employed worker a purchasing power about 12 percent greater than in 1929, after paying for the usual quantity of food. This increased purchasing power among farmers and city workers has made possible the 100-percent advance in industrial production since 1932.

Note that I am speaking only of those employed, and that the problem of the unemployed is of a different sort. The chief point of these figures is that in both depression and recovery farmers, workers, consumers, and businessmen have common interests in fuller and continuous employment, greater industrial output, and prices, wages, and profits that are more nearly in fair and stable balance.

The groundwork for the common interests that have developed between farm and city was laid five generations ago. One hundred and fifty years ago 39 men in the State of Pennsylvania were signing a document designed to promote unity of purpose in order that the various regions might unite in serving the general welfare while, at the same time, preserving democracy. Throughout all the ages to come, I doubt if any group of men can improve much on the spirit with which these 39 men sought to work out a formula for democratically serving the general welfare. Their spirit is good as long as men live together, but the application of their spirit changes from year to year.

Pennsylvania is a totally different State from what it was in 1787 and the problems of the 48 united States are quite different from the 13 struggling Colonies. One hundred and fifty years ago farmers outnumbered the rest of the population 9 to 1, whereas today the town and city people outnumber the farmers 3 to 1. One farm family can feed seven city families today, whereas in the old days it required nine farm families to feed themselves and have enough left to feed one city family.

I am mentioning this because the problem of the farmer and the consumer is so totally different today from what it was when the Constitution was signed. And yet the spirit in which the Founding Fathers approached their problem is identically the spirit which will solve the farm and consumer problem today. It is the spirit by which farmers can attain solidarity of purpose among themselves and by which they and the consumers can cooperate together to serve the general welfare. One hundred and fifty years ago when most food moved less than 50 miles to market, passed through very few hands, and many of the farmers met their customers face to face, the problem was quite different from that of today when most food moves more than 500 miles to market, passes through many hands, and very few farmers see the ultimate consumer face to face.

Consumers have found it necessary to protect their interests by Federal and State pure-food laws and other regulatory measures. Farmers have been forced to protect their interests by State and Federal laws regulating the markets. But thus far the farmers and consumers have

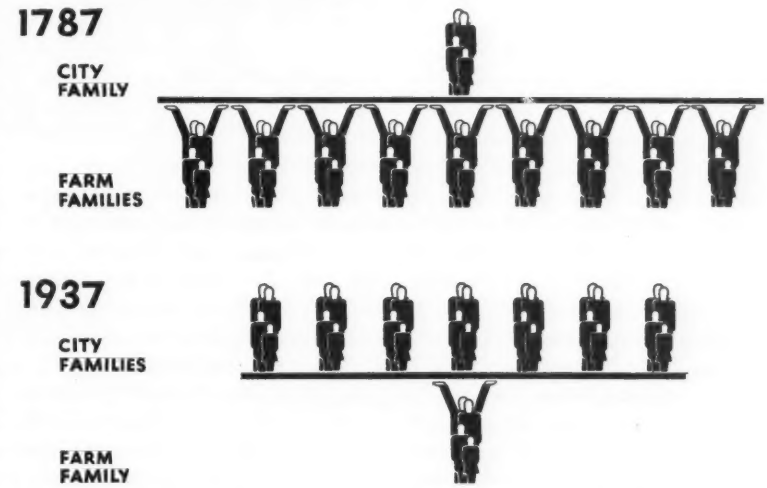
very rarely worked together. Too many people have taken it as a matter of course that farmers wanted higher prices and consumers wanted lower prices and, therefore, the two groups were inevitably antagonistic and beyond reconciling. It seems to me, however, that it will some day be possible to work out a formula which will reconcile the interests of farmers and consumers and give them a unity of purpose in the same way as the Constitution reconciled the interests of the Thirteen States and gave them a unity of purpose.

Both farmers and consumers are interested in an increased balanced output of agricultural products which on the one hand is not so large as to cripple farm purchasing power but, on the other, is not so small as to harm consumers. We know now that those who hold to the philosophy that agricultural production should be steadily increased until the last hungry Chinaman is fed and the last naked Hindu clothed will bring about a situation which, because of the destruction of farm purchasing power, will result in the raggedness and hunger of millions of Americans and positive damage rather than help to the needy Chinese and Hindus.

The bursting bins, the bankrupt farmers, and the ever-lengthening bread lines of 1932 taught farmers and consumers a great lesson. The 1934 and 1936 droughts taught another great lesson. Farmers and consumers are interested not only in farm production; they are also interested in a balanced increased output of industrial products. Farmers from their own selfish point of view should have as much genuine interest in reducing unemployment as the people in the cities. Full employment in the cities means farm prosperity and farm prosperity means full employment in the cities. The problem is to find that state of balance between farmer, consumer, laboring man, and businessman which will result in that type of expanded production which will not end in collapse. If any group violates the principle of balance, there is trouble ahead not only for that group but for all the other groups as well. Balance must be attained by democratic methods. That means education, not indoctrination, but education which has to do with the supply-and-demand facts bearing on the problem of progressive balance.

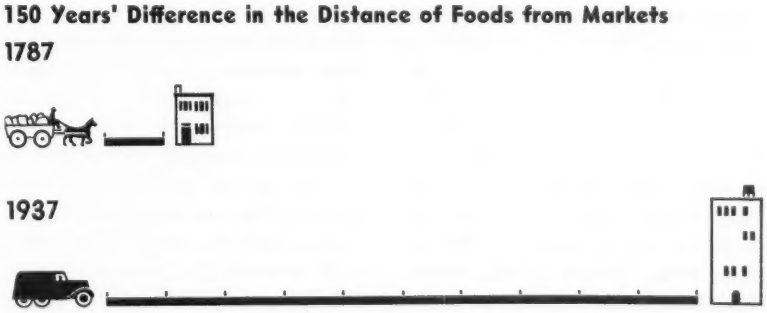
In any written statement describing the method of obtaining unity of purpose between farmers and consumers, it seems to me, of necessity, there will appear many times such words as "abundance", "security", "balance", and "democracy." How can those consumers who produce goods in the towns and cities be given that incentive to increase their production in a balanced way without bringing on the periodic gluts which stall the economic machine? How can farmers be given a like incentive? The Ever Normal Granary legislation along the general lines as proposed in the last Congress seems to me to be an attack on this problem from the farm point of view. Is it possible for the producers in the towns and cities to take corresponding action with respect to industry in

150 Years' Difference in the Number of Farm Families Needed to Feed City Families



"One farm family can feed seven city families today, whereas in the old days it required nine farm families to feed themselves and have enough left over to feed one city family."
—Henry A. Wallace.

150 Years' Difference in the Distance of Foods from Markets



order to bring about increasing output and the maximum of industrial security and stability as between the years?

We now have more figures than ever before about production, employment, income, and money. We know the nature of the business cycles better than ever before. The depression of 1930 to 1932 has made farmers, laboring men, and businessmen eager to do everything possible to avoid a repetition of that disaster.

One of the major results of the great depression we have been steadily emerging from ever since 1932 is a fuller appreciation on the part of farmers of their dependence upon consumers and city workers and on the part of city people of their dependence upon sound agricultural conditions. Where formerly farmers and city people saw the points of seeming conflict of interests, many more now understand that adequate prices to farmers are not a detriment to consumers and that adequate wages to city workers are no detriment to farmers as long as both maintain such balance as to make possible an expanding stable production of goods and fuller, more continuous employment.

From time to time I have sought to find a formula that would summarize briefly the basic elements that constitute this fundamental truth of interdependence between farmers, consumers, workers, and businessmen—a formula which when thoroughly understood would lead us all in the single direction of the general welfare irrespective of our individual approaches.

Whether we approach the problem of the general welfare with a primary interest in prices or in wages or in profits, whether we approach it as farmers or consumers, workers or businessmen, there can be no disagreement as to what it is that all of us want. We want food, shelter, clothes, and a large variety of industrial goods, and we want them more abundantly, not only for those who already have but for those who do not.

This means that farmers must continue to produce to meet the fairly constant per-capita needs of a growing population and to devise such mechanisms as will insure themselves and consumers against drought and against destruction of natural resources, of soil, timber, and soil fertility. It means that industrial output must be brought to a much higher level than at present and kept expanding at such a rate as will not lead to booms and depressions.

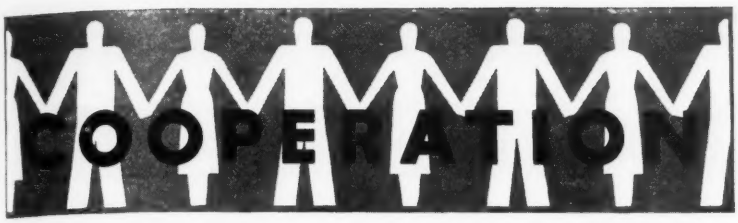
But if we are to expect producers whether on farms or in cities to fulfill their obligations, prices must be adequate to yield fair profits for continuous output and wages must be adequate for continuous expanding consumption. Obviously, any real progress toward the attainment of these self-evident truths involves a thousand and one problems that cannot be met by a group of farmers alone, or by a group of wage earners alone, or by a group of businessmen alone, or by a group of consumers alone. The apparently conflicting interests of each cannot be brought into harmony by the principle of interdependence unless we utilize in the field of economics, in production and distribution, the democratic processes that have served us so well in building our political institutions. These considerations I have summarized into this brief formula which I trust you will note carefully and ponder over:

Our national goal must be increased balanced production of the things which people really need and want (1) at prices low enough so consumers can buy but high enough so producers can keep on producing; (2) with income so distributed that no one is shut off from participation in consumption, except those who refuse to work; (3) with scrupulous regard for the conservation of our remaining natural resources; and (4) by means characteristic of our traditional democratic processes.

Under the Ever-Normal Granary legislation farmers hope to be able to make their contribution to the fulfillment of the requirements of the formula, but their willingness to work for greater economic stability, and therefore greater social and political stability, must be matched by the appropriate willingness on the part of other groups to cooperate in working out the necessary devices. We may not be able to discover the exact industrial counterpart to the Ever-Normal Granary program, but I am certain that when put to the task our social-minded businessmen and their industrial engineers and economists can find at least the first experimental approach to the right formula and the right mechanisms for action. Consumers, particularly those consumers who are also workers, have a right to expect businessmen to search for that formula and that way toward greater economic welfare and security, just as they have a right to ask farmers to put their production problems in better order.

Farmers and consumers, laborers and businessmen, I am convinced, must work on these economic problems of production, distribution, and economic security in the spirit of interdependence if we are to avoid some of the economic and political difficulties that prevail in many of the countries in the rest of the world.

The darkening clouds in Asia and Europe have made us all eager to avoid any repetition of 1917 with all the horrors that for 20 years have followed in its wake. In times such as these, all constructive-minded people are anxious to find a formula to express unity of purpose in order that sound economic growth be maintained and democracy may live. I have confidence that the farmers and consumers working together can and will find a formula for that unity of purpose.



AMERICA'S first "model town", is to be wholly cooperative. So runs the news from Greenbelt, Md., the first of three planned communities now being built by the Farm Security Administration—successor to the Resettlement Administration—to provide housing for people of moderate incomes.

Once things are going full blast at Greenbelt, community members will elect a board of directors for Greenbelt Consumer Services, the community co-op that will manage a general store, self-service market, drug store, movie theater, barber shop, beauty parlor, garage, and any other enterprise that a community of 900 families may need.

Since stores must be open for business when Greenbelt's citizens move into their new homes, the Consumer Distribution Corporation has been asked to arrange for the management and operation of the co-op activities. CDC is a non-profit organization created a year ago by Edward A. Filene to help put on its feet a chain of cooperative department stores. CDC will provide working capital for the Greenbelt projects until such time as the community members can take them over.

In this case the Government is at the receiving—not the giving—end, for the stores will be run without Federal subsidy. In fact, the Government will receive a percentage of the gross sales as rent for the properties. Goods will be sold to members at market prices. Profits will be returned to consumers, a certain amount being reserved to build up capital so that members will eventually acquire complete ownership.

MEMBERSHIP in the 550 production credit associations under the Farm Credit Administration has reached a new high with farmer-stockholders numbering about 258,000. Stock in these associations is held by farmer-borrowers to the amount of $11,816,000—a gain of over 1 million dollars in a year. Said Production Credit Commissioner, S. M. Garwood, "The steady growth of these cooperative short-term credit agencies which make loans only on a sound business basis is attested by the continuous increase in the average size of production loans made, indicating the increased participation of large-scale operators."

BACK FROM Antigonish, Nova Scotia, have come the sixty-odd American members of the First Annual Tour of Nova Scotia Co-ops, arranged by the Cooperative League of the United States of America. The trip began with a 3-day conference at Antigonish. Next came a 5-day sight-seeing tour of study circles and cooperative associations in action. Members visited, as well, credit unions, lobster processing factories, fisheries, and mills. Conclusion of the tour came with the regular annual Rural and Industrial Conference of cooperative educational and business delegates held on the grounds of St. Francis Xavier University on August 21. Before disbanding, delegates took steps to assure the success of a similar tour next year. The tour had been operated on a cooperative basis, savings to be returned to members. The members voted to waive their refunds, which came to the substantial sum of $400, and turned over a large part of this amount to a special tour fund.

SKIRTING close to the 2 million dollar mark, business done during the first 6 months of 1937 by the Consumers' Cooperative Association of North Kansas City, Mo., was the best on its record when sales reached $1,959,000. Growth of CCA has followed two definite policies. Beginning in 1929 with petroleum products, the board of directors has added other items as requirements for the members show that they can be supplied more economically and efficiently by cooperative purchase. When experience proves that additional economies can be made by manufacture, the cooperative has then pushed into that field. First manufacturing effort with lubricating oils was hastened because an outside source of supply proved not to provide oils of dependable quality. Now CCA manufactures, in addition to lubricating oils which it sells abroad and at home, paint, fly spray, grease, and other products, and handles many more which are made to specification for the cooperative. Paint manufacturing equipment installed in the CCA plant early in 1936 was paid for during the first 4 months it was used. Fly spray manufactured by CCA showed a gain of 12 percent in the first half of 1937 over the same months in 1936. A grocery department has been in operation just a little more than a year and a half. Sales in the first half of 1937 were greater than sales for the whole year of 1936. More than 100 items bearing the co-op label are now found on shelves of local cooperative member stores. Co-op labeled foods are packed according to specifications worked out in CCA laboratories. Binder-twine business for the first half of 1937 was 68 percent greater, and tires, tubes, and batteries 9 percent above January to June 1936 sales.

Your Food Supplies & Costs

MEAT prices appear to have hit their post-drought peak and no additional price upswings are in prospect. A gradual increase in meat supplies is expected during the next 12 months, as cattle and hogs fed from this year's large corn crop move to market. Prices are expected to move down to lower levels, particularly after the first of the year. A seasonal decline in pork prices seems probable during the next few months. Beef prices most likely will start their usual downswing during the first half of 1938.

Retail meat prices usually are highest in the late summer and early fall, and lowest in the early winter. A marked decline in supplies of hogs and better grade beef cattle due to the 1934 and 1936 droughts has pushed up prices this summer and fall to high levels. Advances have occurred mainly in the better grades of beef and primarily since June because of extremely small supplies of grain-fed cattle. During September prices of live Choice and Prime cattle at Chicago averaged 80 percent higher than a year ago whereas Medium grade cattle were a third higher. Current prices have topped those prevailing after the 1934 drought because the demand for meat has jumped due to the steady upswing in consumers' incomes underway since 1933.

First decline in average retail meat costs for the country since mid-February occurred during the month ending September 14, when the cost of meats in general went down one-quarter of one percent. In various sections of the country meat prices moved differently. In cities along the Atlantic Seaboard and in the far West they moved upward. Elsewhere they swung down. Sharpest price advances were recorded in New York, Los Angeles, and Boston. Largest decreases occurred in the packing-house centers in the Midwest, Omaha and St. Paul. The small drop in meat costs in general was the result of a drop in pork prices. Beef and lamb prices, on the other hand, stepped up some more, and poultry prices made a marked jump.

Retail food costs in general had been easing off from May until August. Now September reports show a stepup again of one-half of one percent despite lower meat prices. During the month seasonal price advances in eggs and dairy products coupled with a sharp upturn in sugar prices more than balanced lower prices for all other food groups.

On September 14, the index of retail food costs as reported by the Bureau of Labor Statistics was 85.8 percent of the 1923–25 average, and 29 percent above September 1932. Costs were still 21 percent below their September 1929 high point. Compared with a year ago, meat costs are up 14 percent, while fruits and vegetables are 17 percent lower.

Eighteen of the 51 cities reported on showed advances in food costs between mid-August and mid-September. Sharpest gains occurred in New England cities, where the cost of food on September 14 was 5 percent higher than a year ago.

Market supplies of vegetables during the fall and early winter months are expected to be much larger than a year ago, and prices probably will be lower. Celery, sweetpotato, and lettuce production is running about one-sixth larger than in 1936. Onion production is about one-eighth smaller than last year's record crop and the only major crop below the 1936 level.

Potato, onion, and cabbage prices usually reach their low point of the year in October and then advance until new crops mature in the following year. Due to this year's large crops, advances in potato and cabbage prices probably will be smaller than usual. Western onion supplies are much larger than a year ago, while a marked drop has occurred in eastern onions. This situation has caused price increases in the eastern onions. From August 17 to September 14 retail onion and potato prices went down slightly, while cabbage prices moved up. Potato and cabbage prices are about 1.5 cents per pound lower than a year ago, but onion prices are up one-quarter of a cent per pound.

Bargain apple prices are expected to continue through October, when prices hit their season's low point. Prices have dropped sharply since mid-June because of a 70-percent increase in production over 1936. On September 14, apples were retailing at almost half their mid-June level and about 1 cent a pound lower than a year ago. Apple prices generally start moving up in November, with most of the increase beginning in December when supplies start moving out of storage. Due to the large 1937 crop a smaller than usual rise is expected until the high point is reached next summer.

Florida grapefruit and oranges from the 1938 crop are moving to market, and seasonal increases in

citrus supplies are expected during the remainder of this year. Grapefruit marketings to date have been smaller than a year ago because of the later maturity of the crop. The higher sugar content required in the fruit shipped this year has resulted in better fruit moving to market. Heaviest grapefruit marketings generally come from January to April, but marketings also are fairly large from October through December. Florida oranges move to market in largest volume from December to February, while March and April are peak months for California navel or winter oranges. Tangerine shipments reach their peak in December, with Florida practically the sole source of supply. From August 17 to September 14 retail orange prices declined slightly, while lemons moved up 1½ cents a dozen. Peak in orange prices probably has been reached, and prices most likely will start moving down as supplies from California and Florida grow.

Turkey and poultry supplies are smaller than a year ago, but larger supplies of "fixin's" are in prospect for the holiday season. This year's turkey crop is one-tenth smaller than the 1936 record production, but probably will be about the same as crops in 1932 and 1933. Turkeys most likely will come to market earlier than a year ago and at heavier weights. About half the turkey crop is expected to move to market during November, leaving less than the usual amount for December and January shipment. Last year's extremely low price caused farmers to hold their turkeys for late marketings. Smaller supplies of fresh poultry indicate that poultry prices as well as turkey prices will be above last year's low level during the holidays.

Increased supplies of cranberries head the list of holiday fixings. A cranberry production one-fourth larger than a year ago is expected. A bumper crop of walnuts and above average pecan crop and the largest almond crop since 1926 are in prospect. Supplies of fruits and vegetables also are expected to be larger than a year ago.

Record production of vegetables for canning is in prospect for 1937. Drought conditions last year damaged crops and curtailed the amount and quality of the canned pack of most important items except tomatoes. This year the reverse has occurred and growing conditions have been very favorable, except in the case of tomatoes. Canning operations should be about completed this month, and final estimates of production should soon be available. Preliminary estimates indicate that the 1937 pack of canned peas is 40 percent larger than a year ago, while a jump of about 70 percent is indicated for canned corn. Increases of about 30 percent in production are indicated for lima beans, beets, pimientos, and string beans for canning purposes. While the effect of larger supplies will be offset in part by a small carryover from a year ago, prices of canned vegetables most likely will be lower than in 1936. Small price declines have already occurred for most items with the exception of tomato juice and asparagus, which are expected to be above last year's level because of a smaller pack.

A PERSPECTIVE OF FOOD COST CHANGES
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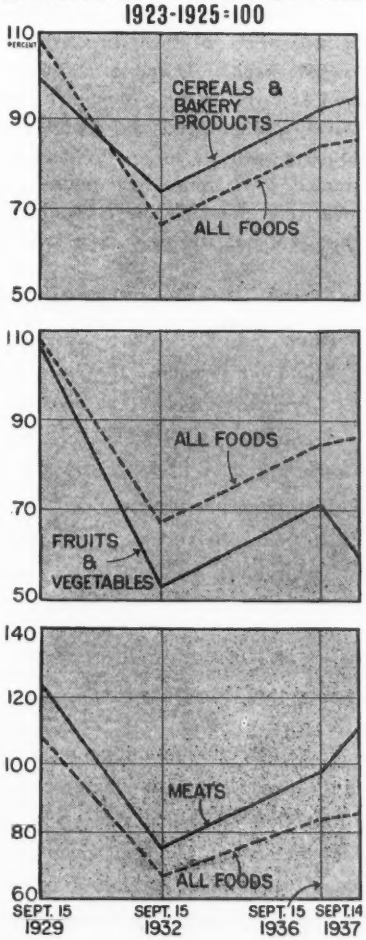

A CLOSE-UP OF FOOD COST CHANGES
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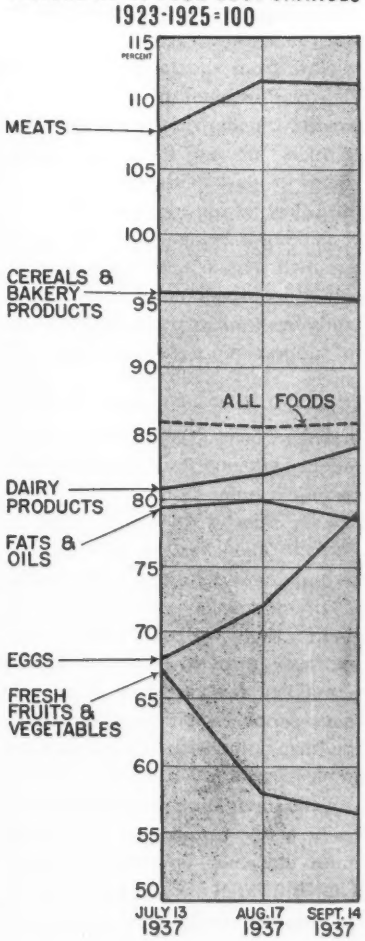

TECHNOLOGY ON THE FARM

[Continued from page 6]

has seen that the farm unit, no matter how large, cannot harvest the monopoly gains that in many cases grow out of consolidation of industrial units. Bankers know that the fixed costs of large units are much higher in agriculture than in industry. Production and prices seesaw perilously. Vagaries of weather and hostile insect pests offer threats to the farmer that the captain of industry does not have to face. Capital has seen these risks send corporation farms to the wall where the farm enterprise built around a family has been able to survive. The family has a tenacious loyalty to the home place that leads it to continue producing even when returns on its labor reach low levels.

Now from the farmers' point of view readjustment toward large units would be downright undesirable. Farmers are no fools and aren't going to part with their holdings until they see ahead some better way of making a living. The depression slammed a gate across the road to urban industrial employment. Already in recent years farms have had to support more people than ever before. In 1935 over 2,000,000 more people were living on farms than had been 5 years earlier. Another 2,000,000 farm youths were staying at home rather than try their luck in cities as they would have in normal times. In 1936 when the farm population resumed the decline of pre-depression years, there was again a slight net movement of people from farms to cities. But there is not yet any certainty as to how many people the cities can take from the farm population and put to work at city jobs.

Talk about farm technology leads easily to the assumption that maximum efficiency is what we want. That is a large assumption. For estimates, say that maximum use of present technologies alone would increase our agricultural output from 25 to 50 percent. This would mean vast unsalable surpluses, for, to quote the report, "agriculture continues to stand face to face with the problem of an increasing potential capacity to produce out of proportion to its capacity to gain outlets for its products. Foreign markets for farm products are not being reopened rapidly. Yet the Nation's farm plant continues to be on a scale capable of sending 12 to 25 percent of its output abroad in years of average crop yields.

"Domestic requirements for farm products remain relatively inelastic. There is doubt whether consumption at present levels of consumers' incomes would increase more than 10 percent even if it were possible to reduce prices of farm products 25 to 50 percent. Domestic consumption of farm products remained relatively stable during the years 1930 to 1933 while farm prices were extremely low. Since food habits are relatively inflexible, it is doubtful that any but the very poor would consume much more as a result of a substantial increase in consumer income."

Altogether, it appears that the family-size farm—long a traditional objective in American agriculture—still has much to recommend it. It has, also, various aids that it can enlist in its competitive struggles. Cooperation is one of these. Already cooperative marketing and buying have made a place for themselves in agriculture. It is probable that they will be of further service to the family-size farm. Already cooperative ownership of farm equipment has brought machinery to the small farm that would ordinarily be out of reach. Cooperative ownership of farm equipment such as threshers, wood-sawing rigs, creameries, grain elevators, and terracing machines offer a big field for expansion of the cooperative principle as an aid to family farming.

Farmer consumer cooperatives have already done a large volume business in the purchase and distribution of production goods such as fertilizers, feeds, twine, gasoline,

STEPPING UP THE OUTPUT

	Around 1880	*Around 1900*	*Around 1930*
WHEAT:			
Man labor per acre:			
Prior to harvest ..... hours..	6	5	3
Harvest ..... hours..	11	7	4
CORN:			
Man labor per acre:			
Prior to harvest ..... hours..	28	22	14
Harvest ..... hours..	18	16	12
COTTON:			
Man labor per acre:			
Prior to harvest ..... hours..	67	62	48
Harvest ..... hours..	52	51	37

Farmers do not and cannot apply at equal rates the products of science and invention. Note how cotton production has slumped behind grain production where efficiency is concerned. This lag is largely due to the fact that cotton has been given less mechanical aid than grain. However, there is no type of agriculture in the United States that does not show some increased efficiency due to technological developments of the last century.

and oil, and this trend seems certain to continue.

Cooperative farm-management associations have sent their experts to small farms to measure labor, feed, machinery, and from their findings to develop programs for better farm production.

To go out of the cooperative field, such institutions as the land-grant colleges, the United States and State Departments of Agriculture carry to small farmers the results of research study which they as individuals would not be able to undertake.

Data piled up in abundance are the working material for forming points of view and for evaluating the social gains or social costs arising from different courses of action. Such data we can gather from individual chapters in the report, each of which deals with one of the fields of technology that has contributed to major changes in agriculture.

It is for consumers to examine such material if they are to have a clearer idea of the farmer problem—a problem with which their own fortunes are closely bound.

TIPS FROM TEA TASTERS

[Concluded from page 9]

have a bright, sparkling appearance when it is poured in the cup, the best quality tea may have a dull-colored liquor if made with alkaline water or water high in iron. In England, where teatime is more of a national institution than in the United States, tea blenders are expected to know the chemical constituents of the water in every part of England. Teas are specially blended for Kent to meet the requirements of its chalky water, while Liverpool, known as the best tea-making place in England, requires a different blend.

Ways of making tea vary in different countries. Some like it weak and some like it strong. Most occidental tea drinkers drink tea for its pleasant and unique taste and its stimulating effect. To their palates the weak brew of the Orient is little more than flavored hot water, while the tea made by the back settlers of Australia, who are perhaps the world's heaviest tea drinkers, is so strong that it has lost all the distinctive characteristics of tea. In certain sections of Australia the custom is to put a lot of tea leaves in a pot and let them stew. English and American tea drinkers prefer to steep their tea leaves in boiling water.

There are many open secrets to preparing a good cup of tea. First, use only freshly boiled water. If water is allowed to boil and reboil, most of the air which it contains is driven off in steam, and the water has a flat taste which is imparted to the tea liquor. A pound of tea averages from 150 to 200 cups, depending on whether you like it strong or weak. Experts say that two-thirds of an ounce of tea to a quart of water is the correct amount. Infusion of leaves should take from 3 to 5 minutes. Tea should be made in a warm teapot—preferably in one made of porcelain—and after infusion the liquor should be poured from the leaves. Worst *faux pas* to commit in making tea is to use leaves a second time. A good cup of tea requires fresh tea leaves.

Drink a cup of tea for anything but food value. Tea has no nutritive value except for the sugar and milk or cream that is added to it.

OUR POINT OF VIEW

The CONSUMERS' GUIDE believes that consumption is the end and purpose of production

To that end the CONSUMERS' GUIDE emphasizes the consumer's right to full and correct information on prices, quality of commodities, and on costs and efficiency of distribution. It aims to aid consumers in making wise and economical purchases by reporting changes in prices and costs of food and farm commodities. It relates these changes to developments in the agricultural and general programs of national recovery. It reports on cooperative efforts which are being made by individuals and groups of consumers to obtain the greatest possible value for their expenditures.

The producer of raw materials—the farmer—is dependent upon the consuming power of the people. Likewise, the consumer depends upon the sustained producing power of agriculture. The common interests of consumers and of agriculture far outweigh diversity of interests.

While the CONSUMERS' GUIDE makes public official data of the Departments of Agriculture, Labor, and Commerce, the point of view expressed in its pages does not necessarily reflect official policy but is a presentation of governmental and nongovernmental measures looking toward the advancement of consumers' interests.

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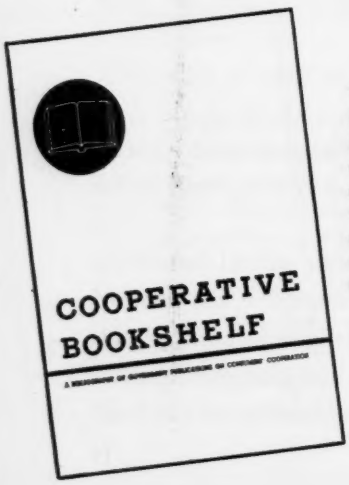

OFF THE PRESS

This bibliography of government publications on consumers' cooperation brings together material of current use or interest on how, where, and why consumers are going into business for themselves. Students of this movement—which claims an annual business of a half billion dollars—will find this a useful reference guide.

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